OGMCOAL - RE: Willow Creek Draft Phase I Bond Release Package Task #3467

From:

April Abate

To:

Christina Hulsman; Jim Smith; OGMCOAL@utah.gov

Date:

6/23/2010 3:15 PM

Subject:

RE: Willow Creek Draft Phase I Bond Release Package Task #3467

Attachments:

PHASE I BOND RELEASE DOCUMENT.pdf; Willow Creek Public Notice.pdf; Willow Creek Bond

Release 06082010.rtf; April Abate.vcf

Hello Christy,

Here is the Phase I Bond Release packet for the Willow Creek Mine (Crandall Canyon area) that you requested for your review. Please note that this is still in DRAFT format but it has been reviewed by Jim Smith, the Permit Supervisor here. I am also attaching the public notice and inspection report documents that will be included in the final issue of the package.

I appreciate your time on this and please let me know if you have any questions I can answer. Thanks Christy!

Best regards,

April

April A. Abate

Environmental Scientist II Division of Oil, Gas and Mining 1594 W. North Temple, Suite 1210 Salt Lake City, Utah 84114-5801 T: 801.538.5214

F: 801.359.3940 M: 801.232.1339

>>> "Hulsman, Christina" <chulsman@osmre.gov> 6/21/2010 4:00 PM >>>

I have to concur with your findings. So, once I receive the packets, I will write the letters. The weather was perfect! I was in WV last week and the humidity was intense (compared to the West) and now I'm in Delta, CO. Hopefully the heat doesn't set in while we are out here.

Christy Hulsman

From: April Abate [aprilabate@utah.gov] **Sent:** Tuesday, June 15, 2010 12:21 PM

To: Hulsman, Christina

Subject: Willow Creek and Starpoint Mines Concurrence Letters

Hi Christy,

See Mend For additional information File in:

☐ Confidential ☐ Shelf

Date Folder 062310 C10070038

Hope you enjoyed your trip to Utah (Yewtah). June is a nice time of year here - before the brutal heat really starts to set in. I wanted to ask you about the concurrence letters for the two mines you visited during your inspections here. I am preparing the findings package and I am just following up with you on the status of the concurrence letters - assuming we get concurrence from OSM, that is.



If you need any additional information please let me know. Good to see you again!

Regards,

April

April A. Abate

M: 801.232.1339

Environmental Scientist II
Division of Oil, Gas and Mining
1594 W. North Temple, Suite 1210
Salt Lake City, Utah 84114-5801
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June 17, 2010

Mr. Dennis Ware Plateau Mining Company P.O. Box 30 Helper, Utah 84526-0030

Subject: <u>Approval of Phase I Bond Release of Remaining Reclaimed Areas, Task ID # 3467, Plateau Mining Corporation, Crandall Canyon, Willow Creek Mine C/007/0038</u>

Dear Mr. Ware:

The Division has processed your application for Phase I bond release for the Crandall Canyon area of the Willow Creek Mine. Bond release is hereby approved. Plateau Mining Corporation has requested a reduction in the bond for the full 60% for the Crandall Canyon portion of the Willow Creek Bond. This Phase I bond release applies to the reclaimed 32.96 acres of land in Crandall Canyon. The reclamation work consisted of demolition of surface facilities, backfilling and sealing of two mine shafts, general backfilling and grading of the canyon, resoiling, seeding and mulching. Crandall Canyon is located in Sections 27 and 28, T. 12 S., R. 9 E. The effective date of this release is June 17, 2010.

A copy of the Division's Decision Document, which discusses the findings that support the bond release, is enclosed. The US Office of Surface Mining, and the Bureau of Land Management have concurred with this bond release.

Thank you for your help during this process. If you have any questions, please call April Abate at 801-538-5214 or Daron Haddock at 801-538-5325.

Sincerely,

John R. Baza Director

DRH/sqs

Enclosure (Decision Document)

Travelers Casualty & Surety Company of America

OSM

Price Field Office

O:\015017.DBD\FINAL\WG3221\Approval.doc

Utah Coal Regulatory Program

Willow Creek Mine Crandall Canyon Phase I Bond Release 007/0038 Carbon County, Utah

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Utah Coal Regulatory Program

DECISION DOCUMENT

Willow Creek Mine Crandall Canyon Carbon County, Utah

ACTION

Grant Approval of Bond Release

The Division received Plateau Mining Corporation's (PMC) application for Phase I bond release on November 30, 2009. The Permittee currently has a surety bond in the amount of \$2,175,114 of which 1,251,000 is designated for Crandall Canyon payable to the Utah Division of Oil, Gas and Mining (DOGM) and the US Office of Surface Mining Reclamation and Enforcement (OSMRE). PMC is seeking release of 750,600 - the full 60%, as required by the Utah coal rules for Phase I Bond Releases.

This Phase I bond release applies to the 32.96 acres of land in Crandall Canyon of that amount, 16.93 acres represent the reclaimed area. The reclaimed area includes 1 acre of reestablished road and 15.93 acres that have been deep gouged and seeded. The area surrounding the reclaimed 16.93 acres consists of a combination of undisturbed area and a road accessing the private property further up the canyon. The reclamation work consisted of demolition of surface facilities, backfilling and sealing of two mine shafts, general backfilling and grading of the canyon, resoiling, seeding and mulching. The reclaimed land is located in Crandall Canyon approximately 5.5 miles north of Helper, Utah off Highway 6 on the following described lands:

Township 12 South, Range 9 East, SLB&M, Utah

Section 22: Portions of the SE1/4, SW1/4, and SW1/4, SE1/4

Section 27: Portions of the NE1/4, NW1/4, and SW1/4, NW1/4

Section 28: Portions of the NW1/4, SW1/4,

NE1/4, SW1/4 SW1/4, SW1/4 NE1/4, SE1/4

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SW1/4, SE1/4, and SE1/4, SE1/4

The Permittee published notification of the application for bond release in the Sun Advocate Newspaper, Price, Utah on February 2, 9, 16, 23, 2010. On May 12, 2010, the Division sent a letter inviting parties of interest to participate in a bond release inspection of the site, and the on-site inspection was done on Tuesday, June 8, 2010. Dennis Ware representing PMC accompanied one representative from the US Bureau of Land Management office, one representative from the OSMRE, one representative from the State of Utah Division of Water Quality, one representative of Blackhawk Coal Company – the parent company of PMC, and several Division personnel. A copy of the inspection report is enclosed.

The Division of Oil, Gas and Mining finds that PMC has completed Phase I reclamation of the Crandall Canyon area of the Willow Creek mine as required by the Utah Coal Mining Rules. In a letter dated June 11, 2010 the BLM stated their concurrence with Phase I bond release. In a letter dated June 15, 2010, the Division of Water Quality issued their concurrence with the Phase I bond release. The OSMRE sent a concurrence letter on _______.

BACKGROUND

On November 30, 2010, the Permittee submitted an application to the Division for Phase I bond release of the Crandall Canyon portion of the Willow Creek reclamation bond.

The Willow Creek Mine is owned by PMC and is located approximately 5.5 miles north of Helper, Utah. Mining at this site began in 1997 and permanently closed in 2002. With the closure of the Willow Creek Mine and Preparation Plant, the Crandall Canyon shafts were no longer needed. The Crandall Canyon facilities were initially reclaimed in the summer of 2003 with final seeding in the fall of 2003. A small amount of settlement of the backfilled No. 1 (western) shaft occurred in 2004 (<10 feet) and in 2005 less than 5 feet additional soil from the immediate area was added and immediately reseeded after regarding was complete.

In November 2006, significant settlement of the backfilled shaft No. 2 (eastern) ventilation shaft was discovered. Soil from the immediate area was dozed into the shaft until water from inside the shaft began to spill into the adjacent drainage. The shaft area was then temporarily fenced for safety purposes. Elevated concentrations of suspended solids from water samples from inside the shaft indicated elevated levels of suspended solids. Therefore, a holding pond was constructed adjacent to the shaft to pump the water into. In July 2008, after the backfill was allowed to settle at Shaft No. 2, the backfilled soil was excavated to a depth of approximately 2 feet below the shaft collar. Bentonite was emplaced on the backfill to the top of the shaft collar and soil was then mounded over the shaft above the ground elevation in order to anticipate any

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additional settling. The area was then regarded and reseeded. There are no remaining sediment control structures (ponds, silt fences, straw bales) or diversions to be removed.

CHRONOLOGY OF CRANDALL CANYON RECLAMATION

Fall 2003 Initial Backfilling of the #2 shaft as part of final reclamation

November 27, 2006 Discovery that significant settlement of the #2 shaft had occurred

December 2006 Temporary cover placed over shaft and area fenced for safety

April 2007 Clean water from the shaft discharged into the Price River

Evaporation pond was constructed to hold high TSS water

July 2007 Finished placing high TSS water in evaporation pond

#2 Shaft backfilled

July 2008 Evaporation pond reclaimed and area reseeded

CHRONOLOGY FOR PHASE I BOND RELEASE

November 30, 2009 PMC sends letters to local governments, state and Federal regulatory

agencies, and property owners notifying them of the proposed bond release.

November 30, 2009 Division receives Phase I bond release application from PMC for Phase I

bond release for approximately 32.96 acres of land within Crandall Canyon.

February 2, 9, 16, 23,

2010 Phase I bond release published in the <u>Sun Advocate</u>, a Carbon County

newspaper based in Price, Utah.

March 23, 2010 End of public comment period. No comments received.

May 12, 2010 The Division sent letters of invitation to attend the bond release inspection

on December 3, 2008.

May 4, 2010 Preliminary Bond Release Inspection – Permittee and Division Staff Only

June 8, 2010 Phase I Bond Release inspection.

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In attendance:

Dennis Ware, PMC

Sue Wiler, BLM

Christina Hulsman, OSM Daron Haddock, DOGM Priscilla Burton, DOGM April Abate, DOGM Joe Helfrich, DOGM Pete Hess, DOGM

Jeff Studenka, DWQ

Tonya Hammond, Blackhawk Coal Company Reed Martineau, Adjacent Private Landowner

SUMMARY OF FINDINGS:

A review of the mine site and technical evaluation of the supporting data was provided in the May 1, 2008 bond release request. The Phase I bond release is for 32.96 acres of the Crandall Canyon portion of the Willow Creek Mine. The Phase I bond release was advertised for four consecutive weeks. No comments were received during the public comment period. A bond release inspection was conducted on June 8, 2010. No issues were identified in the inspection report or by any of the representatives from other agencies who attended the inspection. The Division received letters of concurrence from BLM on June 11, 2010, the Division of Water Quality on June 15, 2010 and OSMRE on

PHASE I BOND RELEASE RECOMMENDATION

Grant approval of Phase I bond release. PMC has met all the requirements for the Phase I Bond Release in accordance with R645-301.800.

State of Utah



Coal Regulatory Program

Technical Analysis and Findings

Plateau Mining Corporation Crandall Canyon – Willow Creek Mine C/007/0038 June 14, 2010

TECHNICAL ANALYSIS

The Division ensures that coal mining and reclamation operations in the State of Utah are consistent with the Coal Mining Reclamation Act of 1979 (Utah Code Annotated 40-10) and the Surface Mining Control and Reclamation Act of 1977 (Public Law 95-87). The Utah R645 Coal Mining Rules are the procedures to implement the Act. The Division reviews each permit or application for permit change, renewal, transfer, assignment, or sale of permit right for conformance to the R645-Coal Mining Rules. The Applicant/Permittee must comply with all the minimum regulatory requirements as established by the R645 Coal Mining Rules.

The regulatory requirements for obtaining a Utah Coal Mining Permit are included in the section headings of the Technical Analysis (TA) for reference. A complete and current copy of the coal rules can be found at http://ogm.utah.gov

The TA is organized into section headings following the organization of the R645-Coal Mining Rules. The Division analyzes each section and writes findings to indicate whether or not the application is in compliance with the requirements of that section of the R645-Coal Mining Rules.

TECHNICAL ANALYSIS DESCRIPTION

This TA addresses Phase I Bond Release on the Crandall Canyon portion of the Willow Creek mine. The reclamation areas in Crandall Canyon consisted of demolition of surface facilities, backfilling of mine shafts, general backfilling and grading, resoiling, seeding and mulching. Crandall Canyon is located in Township 12 S., R. 9 E, within portions of Sections 22, 27 and 28, Salt Lake Base Meridian approximately 5.5 miles north of Helper, Utah on Highway 6. The total acreage that this Phase I Bond applies to is 32.96 acres.

In 2003, the initial demolition and reclamation of the surface facilities began. Broadcast seeding occurred initially during the fall of 2003, with seedlings planted fall of 2004. The area surrounding Shaft No. 1 was regraded and reseeded during the fall of 2005 to repair the settlement of the shaft. The area adjacent to shaft No. 2 was regarded and reseeded July 2008. The entire site has been reclaimed to the final configuration.

The Crandall Canyon portion of the Willow Creek bond totals \$750,600. The Permittee has requested the full 60% reimbursement as allowed by the rules for the Phase I Bond Release.

RECLAMATION PLAN

GENERAL REQUIREMENTS

Regulatory Reference: PL 95-87 Sec. 515 and 516; 30 CFR Sec. 784.13, 784.14, 784.15, 784.16, 784.17, 784.18, 784.19, 784.20, 784.21, 784.22, 784.23, 784.24, 784.25, 784.26; R645-301-231, -301-233, -301-322, -301-323, -301-323, -301-331, -301-333, -301-341, -301-342, -301-411, -301-412, -301-422, -301-512, -301-513, -301-521, -301-522, -301-525, -301-526, -301-527, -301-528, -301-529, -301-531, -301-531, -301-534, -301-536, -301-537, -301-542, -301-623, -301-624, -301-625, -301-626, -301-631, -301-632, -301-731, -301-723, -301-724, -301-725, -301-726, -301-728, -301-729, -301-731, -301-732, -301-733, -301-746, -301-764, -301-830.

Analysis:

The Permittee has met the general requirements for Phase I Bond Release. The following presents a Chronology of reclamation activities for Crandall Canyon:

2003	Initial Demolition of Surface Facilities Backfilling of Shafts, General Backfilling, and
	Broadcast Seeding

2004 Seedlings Planted

2005 Regrading and reseeding to repair settled shaft No. 1

2008 The area adjacent to shaft No. 2 was regarded and reseeded July 2008.

POSTMINING LAND USES

Regulatory Reference: 30 CFR Sec. 784.15, 784.200, 785.16, 816.133, 817.133; R645-301-412, -301-413, -301-414, -302-270, -302-271, -302-272, -302-273, -302-274, -302-275.

The postmining land use for Crandall Canyon is wildlife habitat and also, but not limited to private recreational use by the adjacent landowner such as hunting, cabin sites, BLM access for grazing. To facilitate these uses, a new primary road was constructed through the canyon in order to provide access and egress to the canyon. The road is intended to remain in place after Phase III Bond Release. Letters and comments with regard to leaving the road in place were solicited. None of the comments received indicated any opposition to leaving the road in place.

Findings:

The information in the application is adequate to meet the requirements of this section of the regulations.

APPROXIMATE ORIGINAL CONTOUR RESTORATION

Regulatory Reference: 30 CFR Sec. 784.15, 785.16, 816.102, 816.107, 816.133, 817.102, 817.107, 817.133; R645-301-234, -301-412, -301-413, -301-512, -301-531, -301-533, -301-533, -301-536, -301-542, -301-731, -301-732, -301-733, -301-764.

Analysis:

Steep canyon side slopes and a relatively broad canyon bottom characterize the natural topography of Crandall Canyon. According to R645-301.533.130, reclamation slopes shall not exceed the angel of repose and shall have a minimum long-tem static safety factor of 1.3. Reclamation soil characteristics were used to identify the angle of repose for sandy loam to loamy sand with 5 to 15% clay and 5 to 75% rock, as well as for loose, dry sand. For slopes up to 36 degrees (1.4:1 slope), a critical safety factor of 1.4 would apply at static conditions.

The Permittee has restored the canyon through the area previously occupied by mine shafts and sedimentation ponds. Steep sidewalls and a broad bottom characterize canyon topography. The Permittee has reclaimed the canyon bottom by aligning the channel near the center of the canyon floor. Concave fill slopes have been constructed to extend from the undisturbed boundary to the reclaimed channel. The fill slopes have been configured this way to be less than the angle of repose for the backfill and flatter than a 2:1 slope in most areas. Topographic highs have been constructed in the areas of the former shafts. Some cut slope areas have been retained on one of the side canyons located on the south side of the road. According to the applicant, the cut slopes were necessary to retain the required safety factor of 1.3. The cut slopes have not shown signs of instability to date.

Findings:

The application package contains cross sections of areas within the reclaimed stream channel on Exhibit 3.7-14AB. The Permittee has provided adequate information contained in the application package pertaining to AOC. Upon inspection, the restored topography was evaluated and determined to correspond well to AOC.

BACKFILLING AND GRADING

Regulatory Reference: 30 CFR Sec. 785.15, 817.102, 817.107; R645-301-234, -301-537, -301-552, -301-553, -302-230, -302-231, -302-232, -302-233.

Analysis:

Two shafts in Crandall Canyon were backfilled during the summer of 2003. Each of the shafts experienced variable amounts of settlement requiring additional backfill to stabilize each shaft. In July 2008, after the backfill was allowed to further settle in the shafts, backfilled soil was excavated to depths of up to two feet below the collar and bentonite was emplaced on the

soil to create a seal and prevent future settling. The entire site has now been reclaimed to final configuration.

The engineering issues related to reclamation of the walls, roads, shafts, and utilities are discussed in Section 3.7-5(3)(3) of the application. Reclamation slopes are reported to be concaves in cross-section and do not exceed a slope of 2:1 except in very small areas, as per R645-301-553. It is reported that no slopes exceed the maximum safe angle of repose, and a 36-degree slope would have a critical safety factor of 1.4 under static conditions. Additionally, no acid forming or toxic materials were encountered during reclamation.

Findings:

Backfilling and grading meet the Coal Mining Rules requirements.

MINE OPENINGS

Regulatory Reference: 30 CFR Sec. 817.13, 817.14, 817.15; R645-301-513, -301-529, -301-551, -301-631, -301-748, -301-765, -301-748.

Analysis:

As per R645-513.500, R-645-529, and the two existing shafts have been backfilled, or otherwise properly managed consistent with MSHA, 30 CFR 75.1711. Both shaft experiences some settlement following initial backfilling. Initial backfill (obtained excess cut material generated by the Utah Department of Transportation) was used to address settlement. Both shafts were backfilled in excess volumes to accommodate future settlement. A 2-foot thick later of bentonite was placed in the No.2 shaft to minimize the potential for water to rise in the shaft. Monitoring indicated that backfill in the No.2 shaft settled 1.4 feet in the period from September 2008 to August 2009.

Findings:

Settlement is generally most rapid immediately following backfilling, and both shaft were backfilled in excess, the shafts are currently considered stable and meet the Coal Mining Rules requirements.

TOPSOIL AND SUBSOIL

Regulatory Reference: 30 CFR Sec. 816.22, 817.22; R645-301-240, -302-317.500.

Redistribution

Reclamation slopes are concave in cross-section and do not exceed a slope of 2:1. Of these acres, 16 required topsoil. Topsoil was to be applied at a depth of twelve inches, requiring 25,800 cubic yards. Table 3.7-10 summarizes the proposed cut/fill calculations: 85,860 cubic yards of cut and 83,990 cubic yards of fill and 6,680 cubic yards of topsoil.

Earthwork (including seeding) at the Crandall Canyon site was completed in the fall of 2003. Substitute topsoil was obtained from the facilities area shown on Map 3.7-7B. The quality of the substitute topsoil is reported in Appendix 3.7S. Further information on topsoil is located in Section 3.7-5(5) and Exhibit 5, Volume 4, Figure 8-5 contains the soil test results for samples taken during Crandall Canyon development in 1981. There was no further testing of soil prior to its use. Soil from the facilities area and topsoil stockpile was graded over the final surface of the reclaimed shafts to a depth of one foot.

Reclamation as-built topography is shown on Maps 3.7-12 AB and 3.7-13AB and associated cross-sections on Map 3.7-14AB. According to the Crandall Canyon bond estimates 92,540 yd³ of earth was moved to rough grade the facilities area, another 30,920 yd³ were hauled from the facilities area to backfill the shaft areas; 3,340 yd³ of topsoil from stockpile No. 2, and 58,385 yd³ of facilities area substitute topsoil were graded over the site (Vol 9, Ex. 17). Topsoil stockpile No. 1 was contaminated with the noxious weed *Cardara draba*, commonly known as Hoary Cress or Whitetop. Topsoil stockpile No. 1 was not utilized and is not included in the application for Phase I bond release.

There were two shafts in Crandall Canyon described in Section 3.7-3(1). The No. 1 intake shaft was 26 ft. x 1,450 ft., with the shaft bottom elevation at 5,352 ft. The No. 2 return air shaft was 20 ft. X approximately 1,400 ft., with the shaft bottom elevation at 5,324 ft. After mine closure, water was measured at an elevation of 5,785 ft. that is 5 ft. below the roof of the D seam in the return shaft. A ventilation circuit existed between the shafts and the D seam as evidenced by ingassing at the return shaft collar and outgassing at the intake shaft collar (App. 3.7N). At the request of the BLM (letter from Sally Wisely to Lowell Braxton, dated October 23, 2001, the reclamation plan for shaft reclamation was changed and both shafts were backfilled to their full depths with spoil, rock, concrete fragments and bentonite, in accordance with the plan described in Appendix 3.7N. Soil was mounded over the shafts to allow for settlement.

Considerable settlement followed. The area surrounding Shaft No. 1 was reworked in 2005 to fill a void (approximately 15 ft. of settlement). Approximately 0.4 acres were redisturbed to fill the void over the No. 1 (upstream) shaft and the area was reseeded (Section 3.7-5(1).

Shaft No. 2 subsidence was more extensive and required that fill be brought in from an outside source. The following summary of the work is derived from emails saved to the Division's Draft file folder and conclusions drawn from these emails may be in error. Depth of settling in Shaft #2 was not reported in the application. Division meeting notes from May 2007 indicate a depth of approximately 168 ft before water. ie. rock falls 3 - 4 sec @ approximately 32 ft/s², therefore approximately 168 ft of free fall before reaching water. The Division's Feb 2007 meeting notes indicate that a first attempt at re-filling the void in November 2007 was done

with 4,000 yd³ of surrounding soil. Subsequently, water saturated this fill and overtopped the shaft and was discharged to Crandall Creek. The water was sampled and analyzed. The Shaft was fenced and left for winter. On April 16, 2007, the UPDES permit was modified to authorize temporary discharge of this water to Crandall Creek (2007/Incoming/0012.pdf). A draft of the General Scope of Work was provided by email to the Division on April 19, 2007 for comment. Water was pumped from the shaft and allowed to settle in a catch basin before discharge to Crandall Canyon Creek. Material excavated from the catch basin along with imported material from a Department of Transportation (UDOT) storage area was used to backfill the shaft. An email communication from Dennis Ware dated April 26, 2009 refers to a verbal approval of this work. A Draft approval of the plan was found in the files dated April 26, 2007. This document was apparently never signed and finalized.

By April 21, 2007, the shaft was filled to 170 feet below the surface (Email from Dennis Ware dated April 30, 2007) with fill from the nearby UDOT road cut stockpile site near the junction of Hwy 6 and 191. The quantity of fill used was not reported in the application, but is described in the General Scope of Work which described the following backfill materials:

- a. First, approximately 95 tons of dry cement will be mixed with equal parts of Contractor supplied 3" to 4" drain rock and dumped into the shaft.
- b. Secondly, approximately 3,700 yards of fill material from the State Road pile on HWY 6 near the mouth of Crandall Canyon will be placed in the Shaft until it is filled to point 20 feet below the level of water inflow into the shaft or, if there is no water inflow, at a point 120 feet below the surface elevation.
- c. Thirdly, 1,160 yards of bentonite will be placed in the shaft on top of the fill material for a distance of 100 feet starting at a point 20 feet below the level of water inflow into the shaft or, if there is no water inflow at a point 120 feet below the surface elevation.
- d. Lastly, additional fill material from the State Road pile on HWY 6 near the mouth of Crandall Canyon will be placed atop the bentonite and brought up to the surface elevation and mounded a minimum of 5 feet above the surface elevation

A column of water 160 ft in depth (above the fill in the shaft) was continuously pumped to the catch basin. In August 2007, when the shaft was nearly empty of water, the shaft was completely backfilled. Division Geologist Dave Darby reported in an email to Pam Grubaugh (August 6, 2007) that an additional 165 ft. of shaft was filled with soil and a trench was excavated to discharge the muddy surface layer which was too heavy to pump. Section 3.7-5(3)(6) of the application states that in 2008, a two foot cap of bentonite was placed four feet beneath the surface grade inside the shaft collar to prevent water from reaching the surface. The 1.2 acre disturbed area around the shaft was reseeded in 2008. Settlement over the past year was 1.4 ft. (Section 3.7-5(3)(2) and Sec. 3.7-5(3)(6)).

ROAD SYSTEMS AND OTHER TRANSPORTATION FACILITIES

Regulatory Reference: 30 CFR Sec. 701.5, 784.24, 817.150, 817.151; R645-100-200, -301-513, -301-521, -301-527, -301-534, -301-537, -301-732.

Retention

The applicant intends to keep the primary access road into the canyon claiming that the road will have many benefits to the watershed and has been built to blend in with the reclaimed surface topography. This road has been approved as part of the post mining land use and will be designated as a private road with a locked gate restricting entry. Additionally, the adjoining landowners have filed requests to the Division to keep the road in place in order to facilitate access to their property. The landowners have indicated that they will responsible for the maintenance of the road and associated drainage controls on their property.

Findings:

The road system through Crandall Canyon has been approved to meet the requirements of Phase I Bond Release and meets the s Coal Mining Rules requirements.

HYDROLOGIC INFORMATION

Regulatory Reference: 30 CFR Sec. 784.14, 784.29, 817.41, 817.42, 817.43, 817.45, 817.49, 817.56, 817.57; R645-301-512, -301-513, -301-514, -301-515, -301-532, -301-532, -301-542, -301-723, -301-724, -301-725, -301-726, -301-726, -301-729, -301-731, -301-733, -301-742, -301-743, -301-751, -301-751, -301-760, -301-761.

Hydrologic Reclamation Plan

The reclamation is described in the Willow Creek Mine MRP, Volume 1, Section 5.0: hydrology is described in Section 5.5 of Volume 1. The plan indicates that upon removal of the sediment ponds 014 and 015 in Crandall Canyon, straw hay bales and silt fencing were to be used as the primary reclamation sediment control methods. According to the Phase I Bond Release application, actual alternative sediment control measures implemented included, hay mulch, deep gouging of growth media, seeding followed by additional mulch and application of chemical treatment to the final mulch layer. The Applicant also goes on to state that any weakness in the implementation of the sediment control plan such as gullies that form a greater than 9-inch depth in areas lacking vegetation will be remedied.

According to the application, all culverts used during mine operations to route the undisturbed runoff under the facilities pad were removed during reclamation. The only operational-phase culverts that remain in Crandall Canyon are associated with the road left in place for the purposes of controlling road runoff. In some instances, swales were installed to replace select culverts in order to reduce maintenance. A map detailing the remaining culverts and ditches was included as Exhibit 3.7-12AB.

There are two stream sample locations, B25 and B26 within Crandall Canyon that are monitored on a quarterly basis. Stream sample B25 appears to be located upstream on the Martineau property. According to the Division water quality monitoring database, neither location has recorded any flow since 2002. The application states that stream and spring points B26 and B-22-1, respectively are within the Phase I bond release area; however B22-1 has been inactive since 2002 and not listed as a quarterly monitoring sampling point according to Table 4.7-3 in the MRP.

Findings:

During the bond release inspection, the reclamation of the two sediment ponds in Crandall Canyon was observed to be adequate. A drainage ditch located on the north side of the road was in place to control run off from the road. Additionally, several drainage swales originating from the canyon walls on the north side of Crandall Canyon were rip rapped and appeared to show good stability. The natural drainage patterns appeared to be adequately restored and no evidence of erosion was noted in the diversions.

The hydrologic reclamation plan for Crandall Canyon meets the R645-301.760 Utah Coal Rules.

REVEGETATION

Regulatory Reference: 30 CFR Sec. 785.18Error! Bookmark not defined., 816.111, 816.113, 816.114, 816.116, 817.111, 817.113, 817.114, 817.116; R645-301-244, -301-353, -301-354, -301-355, -301-356, -302-280, -302-281, -302-282, -302-283, -302-284.

Revegetation: Timing

Regrading, backfilling, shaping, contouring and seeding, with the approved seed mix, occurred in the Fall of 2003 with some rework on the #2 shaft in July of 2008 as noted on exhibit 3.7-16AB. Additional seedlings were planted in the Fall of 2004. Ponderosa Pine and Douglas Fir seedlings were planted at a rate of 100 Ponderosa Pine and 150 Douglas Fir per acre within 200 feet of the reclamation channel.

Revegetation: Mulching and Other Soil Stabilizing Practices

Prior to seeding, hay was incorporated into the topsoil at a rate of 2 tons per acre. After seeding, an additional 1.5 tons per acre of straw mulch was distributed by blower and a tackifier was added to retain the mulch.

Revegetation: Standards For Success

Vegetation in the reclaimed area was sampled in 2008. The summarized data indicated that the species composition and percent cover met or exceed that of the reference areas.

Findings:

The information in the application is adequate to meet the requirements of this section of the regulations.

STABILIZATION OF SURFACE AREAS

Regulatory Reference: 30 CFR Sec. 816.95, 817.95; R645-301-244.

Reclamation treatments (seeding and gouging) are shown as-built reclamation treatment areas Map 3.7-16AB (Vol. 16, Ex. 20). These sediment control measures are further described in Section 3.7-5(4)(5). The regraded site was covered with hay (2 tons/ac.) that was gouged into the surface to a depth of 12 to 18 inches before seeding. The hydroseeding operation was followed by a surface application of 1.5 tons/ac hay mulch blown on the surface with 500 lbs/ac tackifier.

The Crandall Canyon main drainage channel CCRD-11 is depicted in cross-section in Attachment 1, Reclamation Hydrology Calculations. This channel was covered with soil to fill the voids in the riprap and the channel was seeded. Woody species were planted along the channel length in 2004, as described in Section 3.7-5(3)(7).

The seed mix used on the reclaim site and the reclaimed channel is provided in a table in Section 3.7-5(3)(7).

Operational water monitoring site B26 is immediately downstream of the reclaimed facilities area. Site B-22-1 is at the mouth of the canyon, downstream of the Topsoil Stockpile No. 2.

Findings:

The Permittee has adequately applied best management practices to control erosion and prevent sediments from leaving the site.

MAPS, PLANS, AND CROSS SECTIONS OF RECLAMATION OPERATIONS

Regulatory Reference: 30 CFR Sec. 784.23; R645-301-323, -301-512, -301-521, -301-542, -301-632, -301-731.

The application package included as built reclamation topography, cross sections, channel profiles, reclamation treatments areas, and watershed maps. All maps are certified adequately.

Findings:

Maps, plans, and cross sections of reclamation operations meet the Coal Mining Rules requirements.

BONDING AND INSURANCE REQUIREMENTS

Regulatory Reference: 30 CFR Sec. 800; R645-301-800, et seq.

Analysis:

General

In order to transfer the disturbance associated with the Crandall Canyon surface facilities from the Castle Gate Mine, C/007/004 to the Willow Creek Mine, C/007/038, the Division determined that an amount of \$1,251,000 was necessary to complete the demolition, backfilling and grading and revegetation of the area. This is the amount currently set aside of the remaining bond (\$2,175,114) to ensure the three phases of bond release ensuring adequate reclamation of the 32.76 acres

Form of Bond

The \$2,175,114.00 bond currently held by the Division to ensure the complete reclamation of the areas remaining to receive Phase III bond release is **a surety bond**, issued by Travelers Casualty and Surety Insurance Company. This Company has an A.M. Best rating of A+ as of June 30, 2009.

Determination of Bond Amount

The Permittee is applying for a bond release amount of \$ 750,000, which is 60 % (the maximum amount allowable by law) of the \$ 1,251,000.00 bond being held to cover the three phases of reclamation for Crandall Canyon.

If all requirements for Phase I are determined as having been met, and the \$750,000.00 amount is released, the total bond amount remaining for the Willow Creek Mine will be \$1,425,114.00.

Terms and Conditions for Liability Insurance

The Permittee maintains general liability insurance coverage, which meets the requirements of the R645 Coal Mining Rules. The current coverage term is from December 13, 2009 through December 13, 2010.

Findings:

A recommendation to release the Phase I amount being applied for (\$ 750,000.00) can not be made until the Division has made the determination that all requirements relative to Phase I have been addressed.

This determination is based upon the review and approval of all Division technical memos, as well as concurrence from the U. S. Department of the Interior, Office of Surface Mining that the site meets Phase I release requirements.

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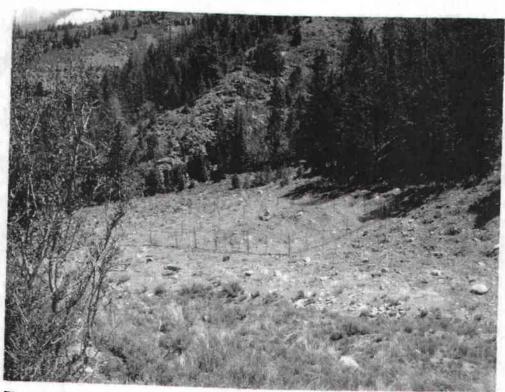


Figure 1. View of Shaft No. 2, which experienced significant settling in 2006.



Figure 2. Primary stream channel that runs through Crandall Canyon

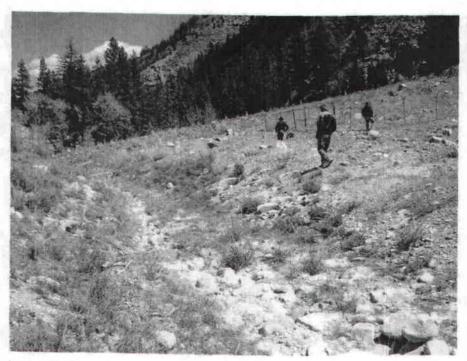


Figure 3. Facing Southeast - view of the stream channel relative to Shaft No. 2



Figure 4. Close up view of backfill material mounded on top of Shaft No. 2.

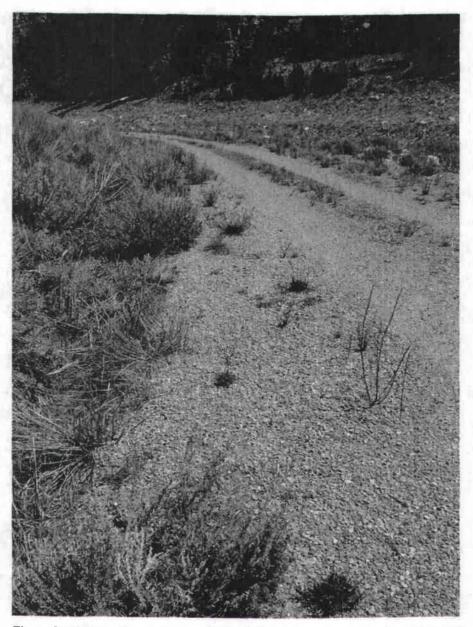


Figure 5. Reclaimed road that runs through Crandall Canyon is to remain for access and egress.

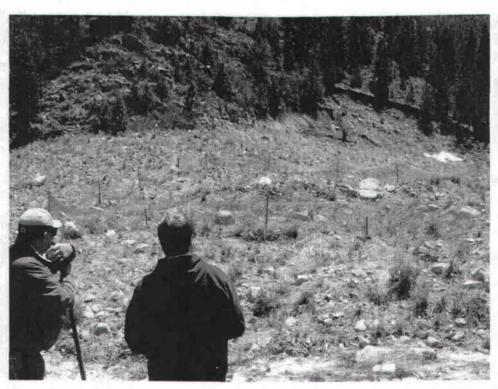


Figure 6. Shaft No. 1 experienced minor amounts of settling and is currently cordoned off with snow fencing.

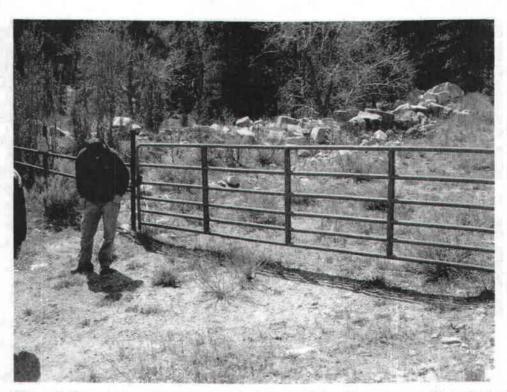


Figure 7. Property boundary gate separates Plateau Mining Company property and private property owned by Martineau.

HEUEIVER

JUN 1 4 2010

C/007/006 Incoming C/007/038 ; #3467



DIV. OF OIL, GAS & MINING United States Department of the Interior

BUREAU OF LAND MANAGEMENT Green River District Office

Price Field Office 125 South 600 West Price, UT 84501

http://www.blm.gov/ut/st/en/fo/price.html

June 11, 2010

In Reply Refer To: 3474 (UTG023)

Daron Haddock Utah Division of Oil Gas and Mining PO Box 145801 Salt Lake City, Utah 84114-5801

Dear Mr. Haddock,

Subject: Phase I Bond Release Inspection for Reclaimed Areas of the Willow Creek Mine, Crandall Canyon. Phase III Bond Release Inspection for the Star Point Mine

Phase I Bond Release Inspection took place on June 8, 2010; Plateau Mining Corporation has completed Phase I of the approved reclamation plan for the areas of Crandall Canyon area other than the disturbed area around the shaft area that subsided in the winter of 2008. The BLM concurs with the reclamation that has taken place.

Phase III Bond Release Inspection took place on June 8, 2010 on 40 acres of the reclaimed surface facilities to change the post mining land use from wildlife habitat, grazing and recreational use to industrial for oil and gas. The BLM concur with the reclamation and the post mining land use change.

If you have any questions concerning this matter, please contact Sue Wiler at (435)636-3651.

Steve Rigby

Assistant Field Office Manager, Coal

cc: (UT923), Roger Bankert



State of Utah

GARY R. HERBERT Governor

GREG BELL Lieutenant Governor C/007/006 Incoming C/007/038 CC: Kevin April

June 15, 2010

Mr. Dennis Ware, Environmental Coordinator Plateau Mining Corp. PO Box 30 Helper, Utah 84526

Subject:

Final Reconnaissance Inspection for UPDES Permit No. UTG040012 - Plateau Mining's

Crandall Canyon and Star Point Reclamation Sites.

Department of **Environmental Quality** Amanda Smith **Executive Director**

DIVISION OF WATER QUALITY

Walter L. Baker, P.E.

Director

Dear Mr. Ware:

As you know, on June 8, 2010 I met with you and members of DOGM, BLM and OSM and conducted a final reconnaissance inspection with regards to the former Crandall Canyon and Star Point mine facilities and UPDES Permit No. UTG040012. Specifically I observed the reclaimed areas and receiving water drainages. No deficiencies were observed and no response is required at this time. As noted in this inspection report, as well as in previous correspondences, the outfalls have been inactivated and DMRs will not need to be submitted so long as the potential to discharge remains obviated. Should conditions change at these facilities to include the need to discharge, please contact our offices to re-activate your permit status and include any outfall information as appropriate.

Enclosed is a copy of the inspection report for your records. I have appreciated your compliance efforts and in keeping me informed of the operations over the past several years. If you have any questions, please contact me at my new phone number (801) 536-4395 or by e-mail at jstudenka@utah.gov. Also, please note below our new address for any future mailings.

Sincerely,

Jeff Studenka, Environmental Scientist

Studenta

UPDES IES Section

Enclosures

cc (w/encl):

Amy Clark, EPA Region VIII

Claron Bjork, SE District Health Department

Dave Ariotti, SE District Engineer

Daron Haddock, Division of Oil Gas & Mines

RECEIVED

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DIV OF OIL GAS & MAING

	nmental Protection Agency ton, D.C. 20460		April philips and a second and
Water Complian	ce Inspection Report		
Section A: Nation	nal Data System Coding (i.e., I	CIS)	
Transaction Code NPDES U T G 0 4 0 0 1 2 11	yr/mo/day 1 0 0 6 0 8	Inspection Ty	e Inspector Fac. Type S 19 20
	Remarks		
Inspection Work Days Facility Self-Monitoring Evaluation Rating	BI QA		-Reserved
5 67 69 570	$\begin{bmatrix} \mathbf{N} \end{bmatrix}$ $\begin{bmatrix} \mathbf{N} \end{bmatrix}$ 7	73 74	75 80
Sec	ction B: Facility Data		
Name and Location of Facility Inspected (For industrial users discharging and NPDES permit number)	to POTW, also include POTW name	Entry Time/ Date 9:05 am /6-8-2010	Permit Effective Date 5-1-2008
Plateau Mining Corp., Crandall Canyon & Star Point Mine Reclamation S	Sites:).03 m ./0 0 2010	
Crandall Canyon site ~5 miles north of Helper, Utah off US 6 HWY in C Star Point site in Wattis, UT off Hwy. 122 in Carbon County	arbon County	Exit Time/ Date	Permit Expiration Date
		1:45 pm /6-8-2010	4-30-2013
Name(s) of On-Site Representative(s)/Title(s)/Phone and Fax Number(s)		Other Facility Data (e.	, SIC NAICS, and other
Dennis Ware, Environmental Coordinator Plateau Mining Corp		descriptive information	underground mining operation
(435) 472-0475		SIC code 1222	fillifet Storing training obsession
		NAICS No. 212112	
Name. Address of Responsible Official/Title/Phone and Fax Number			
Dennis Ware, Environmental Coordinator	Contacted		
Plateau Mining Corp., Willow Creek Mine PO Box 30	\square		
Helper, UT 84526 (435) 472-0475	Yes No		
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			
Section C: Areas Evaluated Du	ring Inspection (Check only th	ose areas evaluated	
Permit Self Monitoring Progr			MS4
Records/Reports Compliance Schedule	Pollution Preven	tion	
Facility Site Review Laboratory	Storm Water		
Effluent/Receiving Waters Operations & Mainter			
Flow Measurement Sludge Handling/Disp			
Section D: Si (Attach additional sheets of narrative and cl	immary of Findings/Comment	is at Violation codes, i	s necessary)
SEV Codes SEV Description	Toolston, section 5 - 10 - 10 - 10 - 10 - 10 - 10 - 10 -		
Name(s) and Signature(s) of Inspector(s)	Agency/Office/Phone and Fax Numb	er(s)	Date:
JEFF STUDENKA, ENVIRONMENTAL, SCIENTIST	DWQ		1 15
Sao turento	(801) 536-4395		6-12-9010
N/A			

Agency/Office/Phone and Fax Number(s)
DWQ
(801) 536-4390

EPA Form 3560-3 (Rev 1-06) Previous editions are obsolete

Name and Signature of Management Q A Reviewer
MIKE HERKIMER, MANAGER
UPDES IES SECTION

INSPECTION PROTOCOL

UPDES Permit #:

UTG040012 - Plateau Mining Corp.

Inspection Type:

Reconnaissance Inspection (Final Reclamation)

Inspection Date:

June 8, 2010

Weather Conditions: Sunny and warm, ~75° F

Jeff Studenka of the Division of Water Quality (DWQ) visited the reclaimed Crandall Canyon and Star Point Mine sites as part of DOGM's Bond Release Inspection process. Representatives from Plateau Mining, DOGM, BLM and OSM were also present.

FACILITY DESCRIPTION

Locations:

Crandall Canyon ~5 miles North of Helper off US 6 in Carbon County, UT.

Coordinates: latitude 39° 45' 47.46", longitude 110° 53' 59.21"

Star Point Mine site is in Wattis off Hwy. 122 in Carbon County, UT.

Coordinates: latitude 39° 31' 43.28", longitude 111° 01' 16.30"

No flow data since Crandall Canyon's temporary Outfall 016 in 2007. All outfalls have either been reclaimed or transferred to other owners and the potential to discharge has been obviated.

Receiving waters:

Crandall Canyon Creek (dry) → Price River

Serviceberry Creek (dry) → Price River drainage

Site Info: Former underground coal mining operation facilities. The mining operations are no longer present and reclamation activities were completed several years ago. Outfall 016 was added to the existing UPDES general permit coverage, via a permit modification effective April 16, 2007, to provide for the temporary dewatering of the #2 Mine Shaft in Crandall Canyon, which subsided several hundred feet in November 2006 and subsequently filled with ground water. A pump was placed into the mine shaft water column and was pumped out at a rate of ~300 gpm and into the natural canyon drainage. Dewatering operations were completed in July 2007 and the shaft was safely backfilled and the area reclaimed once again by spring of 2008. Outfall 016 is no longer in place; the potential to discharge obviated and thus has been inactivated along with previous outfalls.

INSPECTION SUMMARY

There were no deficiencies noted during the previous inspection of these areas for follow up (CEI performed 8-26-2008). A tour of the facility included observing the reclaimed areas of both the Crandall Canyon and Start Point mine sites. The receiving water drainages were also observed and a few photos were collected for the file, as this will likely be the final DWQ inspection of these areas.

DEFICIENCIES

No deficiencies with respect to the UPDES permit were observed during the inspection.

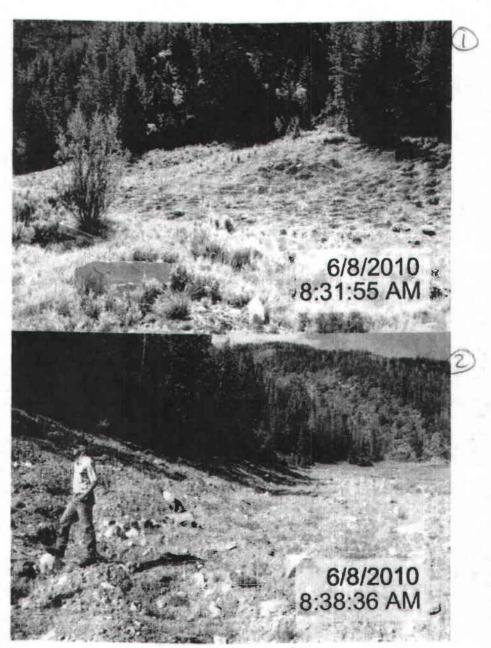
REQUIREMENTS

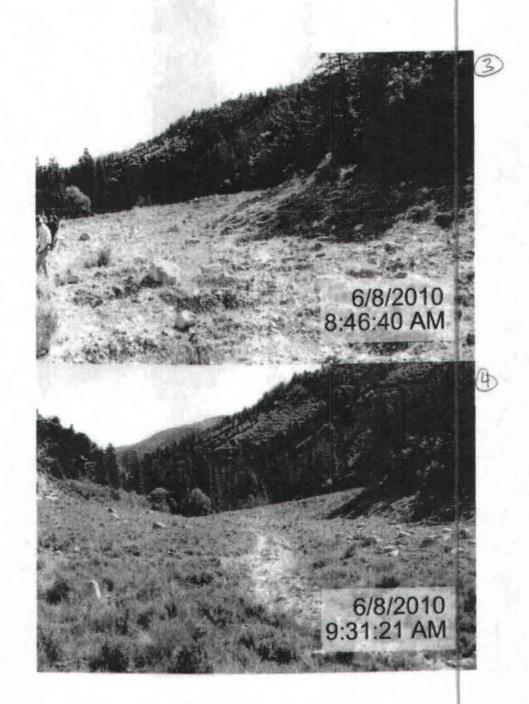
None

ALC-Willow Creek Hine Reclamation Sites (UTG040012)

		Photo Log	1		
Photo Number	File Name	Description	Date/ Time		Photographer
		Crandall Caryon Mine Shaft #2 area	(-8-1	٥	72
(2)		Crandall Conyon temp. Sed. pond area	(a-\$-	10	JS
		as reclaimed in 2008			
3		Overview of reclaimed sed pond	0-6	٦٥	55
		of Mine shaf#2 area in Crondell Conyon			
<u> (U) </u>	-	UPStream in dry channel of 3	۵-5	ان)-	JZ
(5)		Former Star Point Mine site as	(c-8-	(0	25
		reclaimed, waters, ut.			
(b)		Reclaimed areas looking down	6	(5	J\$
		Stream in waters, ut			
		More recent reclaimed acreage	3-8	-(ô	JJ
		on South side of road, watths, or			
<u> </u>		Recently reclaimed areas facing West	(6-18	-13	JJ
		from South side of road in Waths			
t	M) -				

PMC- Willow Creek Hine Redamation Sites (UTGO40012)





AFFIDALTT OF PUBLICATION

STATE OF CLAID

ounty of Carisma)

Richard Shaw, on oath, say that I am the Publisher of the Sun Advocate, a cylice-weekly newspaper of general circulation, patriished at Price. State a true copy of which is hereto attached, was published in the full issue of such newspaper ...: 4 (Four) consecutive issues, and the first publication was on the 2nd day of February, 2010, and that the last publication of such notice was in the issue of such newspaper dated the 13rd day of February 2010.

Richard Shar Publisher

Subscribed and sworn to before me this 3rd day of 4 obruary, 2010.

Notary Public My commission expires January III, 2011 Residing at Price, Utah

Lineth Hayn

Publication Vo. \$ 698.88



PUBLIC NOTICE

APPLICATION FOR PHASE I BOND RELEASE FOR CRANDALL CANYON PLATEAU MINING CORPORATION WILLOW CREEK MINE PERMIT C/007/0038, LAST RENEWED ON 04/24/2006 CARBON COUNTY, UTAH

Plateau Mining Corporation, PO. 8ox 30, Helper, UT 84525, has completed Phase I of the approved reclamation plan for the approximately 32.96 acres of land related to the Crandall Carryon portion of his Willow Creek Mine Permit. This Phase I bond release application is based on completing the demolition, backfilling and grading and drawing control requirements in accordance with the approved reclamation of an. The intitial reclamation work applicable to this bond release application was completed in 2003; subsequent maintenance was completed in 2008.

In accordance with the requirements of R645-301-880, of the State of Utah R645-Coal Mining Rules, notice is hereby given to the general public that Plateau Mining Corporation is applying for partial release of the performance bond posted for this operation.

The suitety bond posted for the Willow Creek Mine is \$2,175,144 of which \$1,251,000 is designated for the Crandali Ganyon portion of the bond.

Crandall Canyon is located on the Helper, Utan U.S. Geological Survey 7.5 minute quadrangle map. This rectained land is located in Crandall Canyon approximately 5 miles north of Helper Utah on the following described lands.

Section 22: Portions of the SE1/4, SW1/4, and SW1/4, SE1/4.

Section 27: Portions of the NET/4, NW1/4, and SW1/4, NW1/4,

Section 28: Portions of the NW1/4, SW1/4, NW1/4, SW1/4, SW1/4, SW1/4, SW1/4, NW1/4, SE1/4, NE1/4, CE1/4, SW1/4, SE1/4, and SE1/4, SE1/4, 2E1/4.

The Utah Division of Oil. Gas and Mining will now evaluate the proposal to determine whether it meets all the criteria of the Permanent Program Performance Standards according to the requirements of the Utah Goal Mining Rules.

Written comments, objections and requests for public hearing or informal conference on this proposal may be addressed to:

Utah Coel Program Utah Division of Oil, Gas and Mining 1594 West North Temple, Suite 1210 PD. Box 145801 Sall Lake City, Utah 84114-5801

Closing date for submission of such comments, objections and requests for public hearing or informal conference on this proposal must be submitted by March 23, 2010.

Published in the Sun Advocate February 2, 9, 16 and 23, 2010.

Inspection Report

Permit Number: Inspection Type: Inspection Date: Start Date/Time: End Date/Time:

Last Inspection:

C0070038 BOND RELEASE Tuesday, June 08, 2010 6/8/2010 9:00:00 AM 6/8/2010 10:30:00 AM Tuesday, May 04, 2010

Inspector: Daron R. Haddock, Manager

Weather: Warm, Sunny

InspectionID Report Number: 2391

Accepted by:

Permitee PLATEAU MINING CORP
Operator: PLATEAU MINING CORP
Site: WILLOW CREEK MINE

Address: PO BOX 30, HELPER UT 84526-0030

County: CARBON

Permit Type: PERMANENT COAL PROGRAM

Permit Status: ACTIVE

Current Ac	reages	Mineral Ownership	Types of Operations		
14,662.49 T	otal Permitted	Federal	Underground		
71.44 T	otal Disturbed	State	Surface		
92.45	Phase I	County	Loadout		
92.45	Phase II	Fee	Processing		
92.45	Phase III	Other	Reprocessing		

Report summary and status for pending enforcement actions, permit conditions, Division Orders, and amendments:

This is a phase I bond release inspection for the Crandall Canyon area of the Willow Creek Permit. A preliminary inspection of the site was conducted on May 4, 2010 and this is the "official" bond release inspection. The bond release covers an area of 32.96 acres, of which 16.93 acres are reclaimed and the remainder is a combination of undisturbed areas and a road that accesses private property above the mine site.

Also participating in the inspection In addition to the representatives listed above were: Christy Hulsman with OSM and Tonya Hammond representing Blackhawk Coal.

Inspector's

Date

Thursday, June 10, 2010

Daron R. Haddock, Manager Inspector ID Number: 28

Note: This inspection report does not constitute an affidavit of compliance with the regulatory program of the Division of Oil, Gas and Mining.

Inspection Continuation Sheet

Permit Number: C0070038 Inspection Type: BOND RELEASE Inspection Date: Tuesday, June 08, 2010

Page 2 of 3

REVIEW OF PERMIT, PERFORMANCE STANDARDS & PERMIT CONDITION REQUIREMENTS:

- 1. Substantiate the elements on this inspection by checking the appropriate performance standard.
 - a. For COMPLETE inspections provide narrative justification for any elements not fully inspected unless element is not appropriate to the site, in which case check Not Applicable.
 b. For PARTIAL inspections check only the elements evaluated.
- 2. Document any noncompliance situation by reference the NOV issued at the appropriate performance standard listed below.

Signature:

Permit Number: C0070038 Inspection Type: BOND RELEASE Inspection Date: Tuesday, June 08, 2010

Page 3 of 3

4.a Hydrologic Balance: Diversions

Inspected the swales that drained into the main channel for signs of erosion or instability. All swales that crossed the dirt road originated along the northwall of the canyon and were riprapped. No indications of instability or erosion were noted. Main Channel was rip rapped and observed to be dry. The main channel according to the bond release application is designed to handle the 100-year 6-hour storm event calculated to be 133 cfs. Culvert adjacent to the gate that borders the private property was damaged and in need of repair. Other culverts alongside the road and east of the bond release area boundary were inspected and looked to be in satisfactory condition with miniminal maintenance needed.

13. Revegetation

The site was seeded in 2003 following backfilling, grading, and contouring. The 2008 vegetation survey indicated that the standards for success for the site either met or succeeded those of the reference area.

16.b Roads: Drainage Controls

Drainage swales and main ephemeral channel was observed to be in satisfactory condition with no signs of instability or erosion problems.

^{3.} Reference any narratives written in conjunction with this inspection at the appropriate performace standard listed below.

^{4.} Provide a brief status report for all pending enforcement actions, permit conditions, Divison Orders, and amendments.